

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1.-25. (Canceled)

26. (Amended) A blow-molded dimensionally stable polymeric medical balloon having a ~~blow-molded inflated volume with an inflated configuration at an inflation pressure with~~ a shape corresponding to an inner surface of a balloon mold and an inflated outer diameter radial shrinkage of greater than 0% and less than 10% as measured by a percent change between the inflated configuration outer diameter at the inflation pressure ~~difference between the inflated outer diameter of the balloon at a~~ substantially ambient temperature in the balloon mold used to blow-mold the balloon and the inflated configuration outer diameter at the inflation pressure at the substantially ambient temperature ~~the inflated outer diameter of the balloon at an inflation pressure~~ required to fill the ~~blow-molded inflated volume at ambient temperature~~ as part of a catheter system after exposure to a shrinking treatment which causes the radial shrinkage, the balloon having been formed by a process prior to exposure to the shrinking treatment, the process including heat-setting the inflated balloon in the balloon mold using a heating member which applies heat to the balloon simultaneously along the length of the balloon and cooling the inflated balloon to substantially ambient temperature within the mold after the heat-setting, so that the balloon inflated outer diameter radial shrinkage is less than an inflated outer diameter radial shrinkage of a balloon heat-set nonuniformly.

27. (Canceled)

28. (Previously presented) The polymeric balloon of claim 26 wherein the radial shrinkage is less than about 6%.

29. (Previously presented) The polymeric balloon of claim 26 wherein the radial shrinkage is less than about 4%.

30. (Previously presented) The polymeric balloon of claim 26 wherein the balloon has an inflated length axial growth of less than about 10% as measured by a difference between the inflated length of the balloon at the ambient temperature in the balloon mold during blow-molding of the balloon and the inflated length of the balloon at the ambient temperature as part of the catheter system after exposure to the thermal treatment.

31. (Previously presented) The polymeric balloon of claim 30 wherein the axial growth is less than about 6%.

32. (Previously presented) The polymeric balloon of claim 30 wherein the axial growth is less than about 4%.

33. (Previously presented) The polymeric balloon of claim 26 wherein the balloon is formed at least in part of a polyurethane.

34. (Previously presented) The polymeric balloon of claim 26 having a length of about 0.8 to about 8 cm.

35. (Previously presented) The polymeric balloon of claim 26 having a length of about 1.5 to about 3 cm.

36. (Previously presented) The polymeric balloon of claim 26 having an uninflated wall thickness of about 0.1 to about 0.4 mm.

37. (Previously presented) The polymeric balloon of claim 26 having an uninflated wall thickness of about 0.2 mm.